Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of the claims:

1. (currently amended) An apparatus comprising:

input/output (I/O) controller circuit boards;

a storage array circuit board having storage device connectors to couple storage devices to the storage array circuit board; and

a signal routing circuit board having one or more voltage regulators and connectors to couple the storage array circuit board to the signal routing circuit board, connectors to couple I/O controller circuit boards to the signal routing circuit board, and one or more multiplexers to route data signals in a selective manner along one or more first data signal paths between a first I/O controller circuit board and the storage array circuit board and along one or more second data signal paths between a second I/O controller circuit board and the storage array circuit board, wherein the second data signal path(s) share a portion of one or more data signal paths of the first data signal path(s), wherein edge connectors of the signal routing board removably connect ~~connects~~ to both the I/O controller circuit boards and the storage array circuit board while the storage array circuit board remains connected to a housing of the apparatus, the signal routing board and I/O controller circuit boards being horizontally disposed with respect to the storage array circuit board being vertically disposed.

2. (original) The apparatus of claim 1, wherein the signal routing circuit board has one or more connectors to couple a system circuit board to the signal routing circuit board.

3. (original) The apparatus of claim 1, wherein the signal routing circuit board defines one or more paths to supply power from the storage array circuit board to one or more I/O controller circuit boards.

4. (previously presented) The apparatus of claim 1, wherein the one or more voltage regulators supplies power at one or more levels to one or more I/O controller circuit boards.

5. (original) The apparatus of claim 1, wherein the signal routing circuit board defines one or more shared control signal paths to route power control and/or status signals between the storage array circuit board and one or more I/O controller circuit boards.

6. (original) The apparatus of claim 1, wherein the signal routing circuit board defines one or more signal paths to route signals between I/O controller circuit boards.

7. (currently amended) A storage system comprising:

a housing;

a storage array circuit board for mounting in the housing, the storage array circuit board having a plurality of storage device connectors for removably coupling a plurality of storage devices to the storage array circuit board;

at least one input/output (I/O) controller circuit board for insertion in the housing, each I/O controller circuit board for communicating with storage devices; and

a signal routing circuit board having electronics common to circuit boards connected thereto, the signal routing circuit board for removable connection to the storage array circuit board and with each I/O controller circuit board,

wherein the electronics are removable from the housing without removal of the storage array circuit board wherein the I/O controller board and signal routing circuit board connect end-to-end and are horizontally disposed with respect to the storage array circuit board vertically disposed in the housing.

8. (original) The storage system of claim 7, wherein the signal routing circuit board has one or more multiplexers to route data signals in a selective manner along one or more first data signal paths between a first I/O controller circuit board and the storage array circuit board and along one or more second data signal paths between a second I/O controller circuit board and the storage array circuit board, and

wherein the second data signal path(s) share a portion of one or more data signal paths of the first data signal path(s).

9. (original) The storage system of claim 7, wherein the signal routing circuit board is positioned in a generally orthogonal orientation relative to the storage array circuit board when connected to the storage array circuit board.

10. (original) The storage system of claim 7, wherein at least one I/O controller circuit board is positioned in a generally planar orientation relative to the signal routing circuit board when connected to the signal routing circuit board.

11. (original) The storage system of claim 7, wherein the housing defines an opening in a side for insertion of the signal routing circuit board in the housing and an opening in an end for insertion of at least one I/O controller circuit board.

12. (original) The storage system of claim 7, comprising a system circuit board for removable connection to the signal routing circuit board.

13. (original) The storage system of claim 7, comprising one or more power supplies for insertion in the housing and removable coupling to the storage array circuit board.

14. (original) The storage system of claim 7, wherein the signal routing circuit board has one or more voltage regulators to supply power at one or more levels to at least one I/O controller circuit board.

15. (original) The storage system of claim 7, wherein the signal routing circuit board defines one or more shared control signal paths to route power control and/or status signals between the storage array circuit board and at least one I/O controller circuit board.

16. (original) The storage system of claim 7, wherein the signal routing circuit board defines one or more signal paths to route signals between I/O controller circuit boards.